Data Sheet

BCRJ Code:	0145
Cell Line:	LL/2 (LLC1)
Species:	Mus musculus
Vulgar Name:	Mouse
Tissue:	Lung
Morphology:	Rounded - Loosely Attached Or Floating
Disease:	Lewis Lung Carcinoma
Growth Properties:	Mixed, Adherent And Suspension
Applications:	This line is widely used as a model for metastasis and is useful for studying the mechanisms of cancer chemotherapeutic agents.
Tumor Formation::	Yes, in C57BL mice
Biosafety:	1
Addtional Info:	The cells are resistant to 1,3-bis-(2-chloroethyl)-1-nitrosourea, but are sensitive to methotrexate. The cells are reported to be highly tumorigenic, but weakly metastatic in mice. The cells form multilayers in flasks without actually becoming confluent.
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) modified to contain 2 mM L-glutamine, 4500 mg/L glucose and fetal bovine serum to a final concentration of 10%.
Subculturing:	Subcultures are prepared by diluting the suspension 1:4 to 1:6. Cells on the floor of the flask may be dislodged by aspirating several times with culture medium or by rinsing with 0.25% trypsin - 0.53 mM EDTA solution. Population Doubling Time 21 hrs NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010.

Subculturing Medium Renewal:	2 to 3 times per week
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO2), 5% Temperature: 37°C
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)
Thawing Frozen Cells:	SAFETY PRECAUTION: Is highly recommend that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris. 1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the Oring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions. 3. For cells that are sensitive to DMSO is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes. 4.Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). 5. Incubate the culture in a appropriate atmosphere and temperature (see "Culture Conditions" for this cell line). NOTE: It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).
References:	1091: Bertram JS, Janik P. Establishment of a cloned line of Lewis lung carcinoma cells adapted to cell culture. Cancer Lett. 11: 63-73, 1980. PubMed: 7226139 45212: Sharma S, et al. T cell-derived IL-10 promotes lung cancer growth by suppressing both T c
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